Smart JAMP(2021) Feasibility Study on the Introduction of an Advanced Energy System in ASEAN

Category of Issues in the Area

Target Area	• Makassar city South Sulawesi Province Indonesia
Background and Purpose	• In Indonesia, which is composed of many islands, it is important to strengthen energy security and develop resilient infrastructure. • In Makassar city, some islands require improving access to electric power because power is not supplied during the daytime. Therefore Makassar city requested to consider introducing a microgrid system on remote islands. • This project studies the issues in the energy and community field on the remote islands of Makassar city. • And this project also implements a feasibility study of an efficient and effective energy system that utilizes Japanese advanced technology, which solves the remote islands' issues for promoting project formulation of the business implementation.
Related Organization	• Makassar City, BAPPEDA Makassar (Regional Development Planning Agency), ESDM (Ministry of Energy and Mineral Resources), PLN (National Electricity Company), etc.
Project Stage	• Feasibility Study
Contents and Results	1. Examination of issues and needs: Based on the study of the related plans and hearing surveys, there are issues and needs on the remote islands of Makassar city as below. • Energy field: (1) Improve poor power access due to the lack of power supply during the daytime on the islands,(2)Mitigate CO_2 emissions in power supply and (3) Development of resilience island through the installation of emergency power supply in the evacuation shelter and medical facility. • Community field: Development of fishery industrial facility on the remote islands. 2. Outcomes: Makassar city agreed to proceed with discussions for concluding MOU to implement the proposed solution and business scheme as below. • Stable power supply and emergency power supply based on PV, battery, and energy management system and establish O&M system. • Cold-chain service of fishery product through electrification by microgrid: Utilize electric-cart, refrigerator, and ice maker to collect and transport of fishery products efficiently to keep freshness.

Figure 1: Location of the study(3 remote islands in Makassar city)

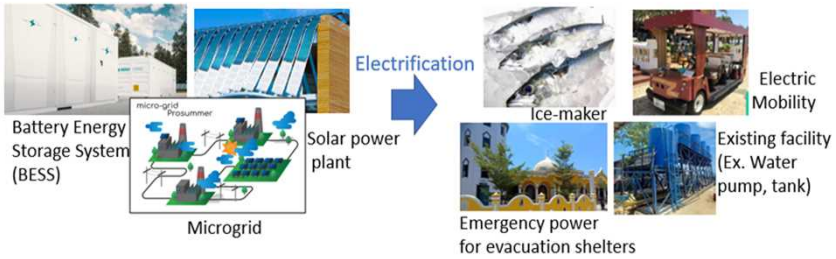

Figure 2: Cold-chain service for fishery product through electric mobility and refrigerating installation by island microgrid (image)